

*Application Serial Number 10/554,400*

construction surface.” That is, the Applicants claim a detection unit selecting a subset of points from a plurality of markers.

Kochi does not distinguish “reference markers” from “reference points.” Neither “reference marker” nor “marker” occurs in Kochi, and “reference point” is never associated with any numeral. This phrase only occurs in the drawing, where an oblong open shape is shown; there is no description of it. Just what in Kochi would correspond to the Applicants reference points, or markers, is unclear. Furthermore, Kochi does not specify at which point in space the asserted “reference point” is supposed to be, and the drawing is schematic, so the exact location is problematic.

(3) The Examiner asserts (middle of last paragraph on page 3) that Kochi discloses the claimed “reference point detection unit (102) to detect two reference points corresponding respectively to two reference markers included in said plurality of reference markers located in the vicinity of said construction surface.” However, no reference number or explanation is provided for the claimed unit (or the points or the markers). The Examiner relies on paragraphs 0067-0068, which refer to an “orientation process using reference position data. Here, the orientation process refers to a preparatory process for carrying out stereo-viewing in aerial photogrammetry, in which the position and tilt of the camera are determined. The reference points, six or more in number, suffices for the purpose.” There is no explanation of how the reference points are used.

(4) The Examiner is invited to note that “six or more in number” is contrary to the claim language, which recites two reference points, not six. With respect, there is no disclosure whatsoever of the two claimed points. Kochi discloses two dimensions, etc., but never discloses two points, except for two “principal points” which are mentioned in paragraph 0084, explaining Fig. 7. From this description it is clear that these principal points are just the optical centers of the lenses, because Kochi mentions “distances from the two principal points to the CCD

*Application Serial Number 10/554,400*

(charge-coupled devices) surfaces being identical ‘a’” and Fig. 7 shows “a” as the focal length of the lens (assuming the cameras are focused at infinity).

(5) Returning to the question of what, exactly, is the oblong “reference point” of Kochi’s drawing, it cannot be assumed that these are stakes, because Kochi teaches against stakes, citing difficulty in setting and poor location accuracy (e.g., paragraph 0006, “finishing stakes can make only rough comparison with the design drawings [and] in some places and it is difficult to place the finishing stakes.”

Since no “reference markers” are even mentioned, and Kochi teaches away from using stakes as “reference markers,” the Applicants respectfully submit that there is no disclosure whatsoever in this reference of any reference markers; there is no selection of any reference markers to obtain Kochi’s reference points, as claimed; and, as noted, there is no selection of just two of any points or markers.

(6) According to the Applicants, recognition of finishing stakes at the construction site is preferred (e.g., 22a, 22b in Fig. 10) and the construction target line is a virtual line that is calculated. After calculation, the operator uses the displayed virtual line to operate the machine.

In contrast, Kochi compares the target data with the stereovision image and the comparison results are displayed for the user to operate the machine according to the displayed results. That is, in Kochi, the design drawing data becomes the target construction surface, but according to the Applicants the target surface is based on stakes that are actually set during construction. This is a large difference.

(7) Also according to the Applicants, the position of the acting component is measured, and this is not disclosed by Kochi (e.g., claim 8, “an acting component detection unit (106) for detecting the position of the acting component (6)”).

SEP 18 2009

*Application Serial Number 10/554,400*

The rejections of the dependent claims are traversed on the basis (among others) of the remarks above, and their dependence.

In view of the aforementioned remarks, the application is submitted to be in condition for allowance, which action, at an early date, is requested.

Respectfully submitted,

KRATZ, QUINTOS & HANSON, LLP

  
Nick S. Bromer  
Attorney for Applicant  
Reg. No. 33,478

NSB/lrj

Suite 400  
1420 K Street, N.W.  
Washington, D.C. 20005  
(202) 659-2930

23850

PATENT & TRADEMARK OFFICE

*I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (571-273-8300) on September 18, 2009.*

Nick Bromer (reg. no. 33,478)

Signature

